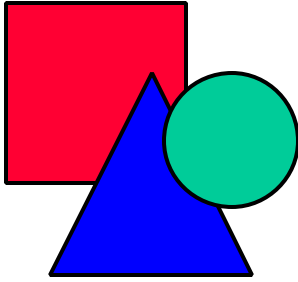


Approval #

970047-U (Replaces 910070-U)



Safety & Buildings Division  
201 East Washington Avenue  
P.O. Box 7969  
Madison, WI 53707

## Wisconsin Material Approval

Material

Titeflex Flexible Connectors

Manufacturer

Titeflex Corporation  
603 Hendee Street  
Springfield, MA 01104

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### SCOPE OF EVALUATION

Fire Safe , Standard R272, Soil Safe 20 (R275), Soil Safe 30 (R275), and Soil Safe APC flexible underground connectors for use with flammable liquids, as manufactured by the Titeflex Corporation, have been evaluated for conformance with **section ILHR 10.51 (2)** of the current edition of the Wisconsin Administrative Flammable and Combustible Liquids Code.

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### DESCRIPTION AND USE

The Fire Safe flexible connector has a stainless steel inner core, a stainless steel reinforcement braid, and zinc dichromate plated steel end fittings.

The Standard R272 flexible connector has a Teflon inner core, a stainless steel reinforcement braid, and zinc dichromate plated steel end fittings.

The Soil Safe 20 has a Teflon inner core, a stainless steel interior reinforcement braid, a layer of polyethylene film, an outer plastic braid, and electrolytically isolated zinc dichromate plated steel end fittings.

The Soil Safe 30 consists of the Soil Safe 20 components and an engineered cathodic protection system that includes factory-attached anodes which are designed to protect the exposed end fittings of the connector for a minimum of 30 years in most soil conditions.

The Soil Safe APC is made entirely of nonmetallic components and is used in direct burial applications. It includes an innercore tube of extruded opaque Teflon tubing, a nylon monofilament overbraid, and polyphenylene sulfide end fittings.

The above flexible connectors are available in diameters ranging from 1 1/2-inch to 3 inches and have a variety of end fitting configurations. The connectors have a maximum length limitation of 8 feet.

The following model numbers are covered by this approval for use at the following maximum rated working pressures.

<u>Model Numbers for Underground Use</u>	<u>Maximum Rated Working Pressure (PSIG)</u>
108992-24-L	550
108992-32-L	400
108992-48-L	50
110165-24-L	150
110165-32-L	150
111430-24-L	150
111430-32-L	150
111351-24-L	550
111351-32-L	400
111438-24-L	550
111438-32-L	400
111360-24-L	150
111360-32-L	150
111360-48-L	50
111394-24-L	150
111394-32-L	150
111450-24-L	150
111450-32-L	150
111393-24-L	150
111393-32-L	150
111398-24-L	150
111398-32-L	150
111398-48-L	50
111404-24-L	150
111404-32-L	150

111431-24-L	150
111431-32-L	150
111415-24-L	150
111415-32-L	150
111434-24-L	150
111434-32-L	150
111419-24-L	150
111419-32-L	150
111420-24-L	150
111420-32-L	150
111442-24-L	150
111442-32-L	150
111607-24-L	50

Model Numbers for Use  
In Underground Sumps

Maximum Rated  
Working Pressure (PSIG)

111504D-24-L	50
111504D-32-L	50
111504E-24-L	50
111504E-32-L	50
111504A-24-L	50
111504A-32-L	50
111504B-24-L	50
111504B-32-L	50
111504C-24-L	50
111504C-32-L	50
111877A-24-L	50
111877C-24-L	50
111877D-24-L	50
111877E-24-L	50
111877F-24-L	50
111877G-24-L	50
111877H-24-L	50
111877J -24-L	50

## TESTS AND RESULTS

Fire Safe, Standard R272, Soil Safe 20 (R275), Soil Safe 30 (R275), and Soil Safe APC connectors have been tested and listed by Underwriters Laboratories, Incorporated, for use with petroleum products, alcohols, and alcohol-gasoline mixtures. The cathodic protection system utilized on Soil Safe

30 has been evaluated by corrosion experts of C/P Utility Services, Hamden, Connecticut, and was determined to be capable of providing a failure-free life in excess of 30 years.

#### LIMITATIONS OF APPROVAL

Fire Safe, Standard R272, Soil Safe 20 (R275), Soil Safe 30 (R275), and Soil Safe APC connectors shall be installed in accordance with the manufacturer's recommendations and suggestions. Soil Safe 30 shall be electrically isolated from all other buried metal components, including pumps, piping, electrical conduits, and tank components, and its corrosion protection system shall be installed and maintained in accordance with the requirements of **s. ILHR 10.55**. Any metal components of all other connectors shall be isolated from the soil.

Installations shall be performed or supervised by a person certified by the Department in accordance with **chapter Comm 5**.

Each connector shall be tested after assembly for external leakage at an aerostatic pressure of not less than the maximum rated working pressure or a hydrostatic pressure of not less than two times the maximum rated working pressure.

The manufacturer's name and model designation shall be stamped or etched on an end fitting or on a stainless steel band secured around the hose braid.

This approval will be valid through December 31, 2002, unless manufacturing modifications are made to the product or a re-examination is deemed necessary by the Department. The Wisconsin Material Approval Number must be provided when plans that include this product are submitted for review.

#### DISCLAIMER

The Department is in no way endorsing or advertising this product. This approval addresses only the specified applications for the product and does not waive any code requirement not specified in this document.

Reviewed by: \_\_\_\_\_

Approval Date: \_\_\_\_\_ By: \_\_\_\_\_

Sam Rockweiler, P.E.  
Code Development Section  
Program Development Bureau

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